National Institute of Environmental Health Sciences

Relation between temperature and mortality in thirteen Spanish cities

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Abstract:

In this study we examined the shape of the association between temperature and mortality in 13 Spanish cities representing a wide range of climatic and socio-demographic conditions. The temperature value linked with minimum mortality (MMT) and the slopes before and after the turning point (MMT) were calculated. Most cities showed a V-shaped temperature-mortality relationship. MMTs were generally higher in cities with warmer climates. Cold and heat effects also depended on climate: effects were greater in hotter cities but lesser in cities with higher variability. The effect of heat was greater than the effect of cold. The effect of cold and MMT was, in general, greater for cardio-respiratory mortality than for total mortality, while the effect of heat was, in general, greater among the elderly.

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Resource Description

Exposure :

weather or climate related pathway by which climate change affects health

Meteorological Factors, Temperature

Temperature: Extreme Cold, Extreme Heat

Geographic Feature:

resource focuses on specific type of geography

Urban

Geographic Location:

resource focuses on specific location

Non-United States

Non-United States: Europe

European Region/Country: European Country

Other European Country : Spain

Health Impact:

specification of health effect or disease related to climate change exposure

Cardiovascular Effect, Morbidity/Mortality, Respiratory Effect

Cardiovascular Effect: Other Cardiovascular Effect

Cardiovascular Disease (other): cardiorespiratory mortality

Respiratory Effect: Other Respiratory Effect

Respiratory Condition (other) : cardiorespiratory mortality

Population of Concern: A focus of content

Population of Concern:

populations at particular risk or vulnerability to climate change impacts

Elderly

Resource Type:

format or standard characteristic of resource

Research Article

Timescale:

time period studied

Time Scale Unspecified